

Prostate Disease Research

Men experience a high probability of prostate health problems as they grow older, including benign prostatic hypertrophy (BPH), prostatic intraepithelial neoplasia—a putative precursor for cancer—and prostate cancer. Risk factors for aberrant prostate growth include age, endocrine status, race, genetics, and environmental factors. In the United States, prostate cancer has become the most frequently diagnosed neoplasm and the second leading cause of cancer mortality in men. Little is known about the regulation of the age-related growth process of the prostate and its relationship to BPH and cancer. There is growing concern that environmental factors including *in utero* and childhood exposures to hormonally active agents may be modifying factors. Independent of aging, both hereditary and environmental factors have been found to influence the rate of prostate growth. The significance of these findings is that the risk associated with such factors is potentially modifiable.

In an effort to increase research on prostate disease, including the role of environmental factors, the NIEHS is participating in the following multi-institute program announcements:

❖ **Molecular Epidemiology of Prostate Carcinogenesis (PA-99-055)**

Stimulates the development of biomarkers of prostate cancer risk and tumor aggressiveness for use in chemoprevention studies

❖ **Biology, Development, and Progression of Malignant Prostate Disease (PA-99-081)**

Encourages new projects focusing on the biology that underlies the development and progression of malignant prostate disease

The National Institute of Diabetes and Digestive and Kidney Diseases and the NIEHS recently cosponsored a request for applications titled “Cell-Specific Delineation of Prostate and Genitourinary Development” to encourage the development of new research tools and methods to study the development and biology of the prostate and genitourinary tract. As a result of its initiative activities, the NIEHS currently supports five new research projects investigating the regulation of prostate growth.

To review the current status of the epidemiological and clinical data as well as explore the state of the knowledge on the biologic mechanisms involved in regulating the growth process, the NIEHS cosponsored a workshop on prostate growth and aging on 13–15 September 2000 with the National Institute of Diabetes and Digestive and Kidney Diseases, the National Institute on Aging, and the National Cancer Institute. The results of this workshop will provide guidance on the design of future initiatives for advancing research on BPH and prostate cancer. The NIEHS will continue to support research to further advance our knowledge of the role of environmental agents and/or factors in hyperplasia, neoplasia, and cancer of the prostate.

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